

1 1. (currently amended) A method for processing incoming print jobs,
2 comprising:
3 determining job description attributes of an incoming print job;
4 determining when attributes of a print channel associated with the incoming print job
5 comprise MUST PRINT, MUST SPOOL or MAY SPOOL; and
6 processing the incoming print job based upon ~~the attributes of the print channel and~~
7 the job description attributes of the incoming print job and whether the print channel
8 attributes are determined to be MUST PRINT, MUST SPOOL or MAY SPOOL.

1 2. (original) The method of claim 1 wherein the processing further comprises:
2 determining whether the job description attributes and the print channel attributes
3 dictate an output path;
4 analyzing a state for a dictated output path when the job description attributes and the
5 print channel attributes dictate an output path; and
6 routing the incoming print job to the dictated path when the state of the dictated path
7 is free.

1 3. (original) The method of claim 2 further comprising signaling a stop flow
2 command to halt the incoming print job when the state of the dictated path is busy.

1 4. (original) The method of claim 3 further comprising restarting the incoming
2 print job when the dictated path becomes available.

1 5. (original) The method of claim 2 further comprising:
2 evaluating a setting for a user output selection when the job description attributes and
3 the print channel attributes do not dictate an output path; and
4 processing the incoming print job based upon the setting for the user output selection.

1 6. (original) The method of claim 5 further comprising:
2 printing the incoming print job when the incoming print job is not required to be
3 spooled because of the job description attributes or the print channel attributes and the setting
4 of the user output selection is PRINT ALL;
5 spooling the incoming print job when the incoming print job is not required to be
6 printed because of the job description attributes or the print channel attributes and the setting
7 of the user output selection is SPOOL ALL;
8 printing the incoming print job when the printer is available, the incoming print job is
9 not required to be printed because of the job description attributes or the print channel
10 attributes and the setting of the user output selection is SPOOL WHEN BUSY; and
11 spooling the incoming print job when the printer is busy, the incoming print job is not
12 required to be printed because of the job description attributes or the print channel attributes
13 and the setting of the user output selection is SPOOL WHEN BUSY.

1 7. (canceled)

1 8. (currently amended) The method of claim 7 1, wherein the print channel
2 attribute is MUST PRINT for print channels that provide bi-directional communication with
3 a host.

1 9. (original) The method of claim 8 wherein the print channel attribute is MUST
2 PRINT for a IPDS port, Coax, Twinax, AppleTalk, Despooler and Internal Print type print
3 control modules.

1 10. (original) The method of claim 8 wherein the print channel attribute is MAY
2 SPOOL for Web Pull, Web Push, IPP, FTP, direct print ports, LPD, NetBIOS, NetWare, and
3 Parallel type print control modules.

1 11. (previously presented) The method of claim 8 wherein the determining job
2 description attributes of an incoming print job further comprises scanning a data stream for
3 the incoming print job.

1 12. (canceled)

1 13. (currently amended) The method of claim ~~12~~ 1, wherein a PDF file
2 comprises a MUST SPOOL job description attribute.

1 14. (original) The method of claim 13 wherein the PDF file is spooled to allow
2 the PDF file to be converted to PostScript before printing.

1 15. (currently amended) The method of claim ~~12~~ 1, wherein an IPDS file
2 comprises a MUST PRINT job description attribute.

1 16. (currently amended) A multiplexer for processing incoming print jobs,
2 comprising:
3 a multiplexer interface for determining when attributes of a print channel associated
4 with the incoming print job comprise MUST PRINT, MUST SPOOL or MAY SPOOL and
5 receiving job description attributes of the incoming print job from the print channel; and
6 a multiplexer processor component, interfaced with the multiplexer interface, for
7 managing the routing of the incoming print job based upon ~~the attributes of the print channel~~
8 and the job description attributes of the incoming print job and whether the print channel
9 attributes are determined to be MUST PRINT, MUST SPOOL or MAY SPOOL.

1 17. (original) The multiplexer of claim 16 wherein the multiplexer processor
2 component determines whether the job description attributes and the print channel attributes
3 dictate an output path, analyzes a state for a dictated output path when the job description
4 attributes and the print channel attributes dictate an output path and routes the incoming print
5 job to the dictated path when the state of the dictated path is free.

1 18. (original) The multiplexer of claim 17 wherein the multiplexer processor
2 component signals a stop flow command to halt the incoming print job when the state of the
3 dictated path is busy.

1 19. (original) The multiplexer of claim 18 wherein the multiplexer processor
2 component restarts the incoming print job when the dictated path becomes available.

1 20. (original) The multiplexer of claim 17 further comprises a multiplexer output
2 selector for receiving a user selection input to control spooling of jobs that are not required to
3 be sent to a spooler or a print engine, wherein the multiplexer processor component evaluates
4 a setting for a user output selection when the job description attributes and the print channel
5 attributes do not dictate an output path and routes the incoming print job based upon the
6 setting for the user output selection.

1 21. (original) The multiplexer of claim 20 wherein the multiplexer processor
2 component prints the incoming print job when the incoming print job is not required to be
3 spooled because of the job description attributes or the print channel attributes and the setting
4 of the user output selection is PRINT ALL, spools the incoming print job when the incoming
5 print job is not required to be printed because of the job description attributes or the print
6 channel attributes and the setting of the user output selection is SPOOL ALL, prints the
7 incoming print job when the printer is available, the incoming print job is not required to be
8 printed because of the job description attributes or the print channel attributes and the setting
9 of the user output selection is SPOOL WHEN BUSY and spools the incoming print job when
10 the printer is busy, the incoming print job is not required to be printed because of the job
11 description attributes or the print channel attributes and the setting of the user output
12 selection is SPOOL WHEN BUSY.

1 22. (canceled)

1 23. (currently amended) The multiplexer of claim ~~22~~ 16, wherein the print
2 channel attribute is MUST PRINT for print channels that provide bi-directional
3 communication with a host.

1 24. (original) The multiplexer of claim 23 wherein the print channel attribute is
2 MUST PRINT for a IPDS port, Coax, Twinax, AppleTalk, Despooler and Internal Print type
3 print control modules.

1 25. (original) The multiplexer of claim 23 wherein the print channel attribute is
2 MAY SPOOL for Web Pull, Web Push, IPP, FTP, direct print ports, LPD, NetBIOS,
3 NetWare, Coas, Twinax and Parallel type print control modules.

1 26. (previously presented) The multiplexer of claim 23 wherein the print channel
2 scans a data stream for the incoming print job to determine the job description attributes of
3 the incoming print job.

1 27. (canceled)

1 28. (currently amended) The multiplexer of claim ~~27~~ 16, wherein a PDF file
2 comprises a MUST SPOOL job description attribute.

1 29. (original) The multiplexer of claim 28 wherein the multiplexer processor
2 component spools the PDF file to allow the PDF file to be converted to PostScript before
3 printing.

1 30. (currently amended) The multiplexer of claim ~~27~~ 16, wherein an IPDS file
2 comprises a MUST PRINT job description attribute.

1 31. (currently amended) A print system, comprising:
2 a print engine for receiving a data stream for an incoming print job and generates
3 print media based upon the data stream;
4 a spooler storing incoming print jobs until sent to the print engine; and
5 a system controller, coupled to the print engine and the spooler, for controlling the
6 print engine, the spooler and the processing of incoming print jobs, the system controller
7 including a multiplexer for managing the incoming print jobs, the multiplexer further
8 comprising:

9 a multiplexer interface for determining when attributes of a print channel
10 associated with the incoming print job comprise MUST PRINT, MUST SPOOL or MAY
11 SPOOL and receiving job description attributes of the incoming print job from the print
12 channel; and

13 a multiplexer processor component, interfaced with the multiplexer interface,
14 for managing the routing of the incoming print job based upon ~~the attributes of the print~~
15 ~~channel and~~ the job description attributes of the incoming print job and whether the print
16 channel attributes are determined to be MUST PRINT, MUST SPOOL or MAY SPOOL.

1 32. (original) The print system of claim 31 wherein the multiplexer processor
2 component determines whether the job description attributes and the print channel attributes
3 dictate an output path, analyzes a state for a dictated output path when the job description
4 attributes and the print channel attributes dictate an output path and routes the incoming print
5 job to the dictated path when the state of the dictated path is free.

1 33. (original) The print system of claim 32 wherein the multiplexer processor
2 component signals a stop flow command to halt the incoming print job when the state of the
3 dictated path is busy.

1 34. (original) The print system of claim 33 wherein the multiplexer processor
2 component restarts the incoming print job when the dictated path becomes available.

1 35. (original) The print system of claim 32 further comprises a multiplexer output
2 selector for receiving a user selection input to control spooling of jobs that are not required to
3 be sent to a spooler or a print engine, wherein the multiplexer processor component evaluates
4 a setting for a user output selection when the job description attributes and the print channel
5 attributes do not dictate an output path and routes the incoming print job based upon the
6 setting for the user output selection.

1 36. (original) The print system of claim 35 wherein the multiplexer processor
2 component prints the incoming print job when the incoming print job is not required to be
3 spooled because of the job description attributes or the print channel attributes and the setting
4 of the user output selection is PRINT ALL, spools the incoming print job when the incoming
5 print job is not required to be printed because of the job description attributes or the print
6 channel attributes and the setting of the user output selection is SPOOL ALL, prints the
7 incoming print job when the printer is available, the incoming print job is not required to be
8 printed because of the job description attributes or the print channel attributes and the setting
9 of the user output selection is SPOOL WHEN BUSY and spools the incoming print job when
10 the printer is busy, the incoming print job is not required to be printed because of the job
11 description attributes or the print channel attributes and the setting of the user output
12 selection is SPOOL WHEN BUSY.

1 37. (canceled)

1 38. (currently amended) The print system of claim ~~37~~ 31, wherein the print
2 channel attribute is MUST PRINT for print channels that provide bi-directional
3 communication with a host.

1 39. (original) The print system of claim 38 wherein the print channel attribute is
2 MUST PRINT for a IPDS port, Coax, Twinax, AppleTalk, Despooler and Internal Print type
3 print control modules.

1 40. (original) The print system of claim 38 wherein the print channel attribute is
2 MAY SPOOL for Web Pull, Web Push, IPP, FTP, direct print ports, LPD, NetBIOS,
3 NetWare, Coax, Twinax and Parallel type print control modules.

1 41. (currently amended) The print system of claim 38 wherein the print channel
2 ~~sniffs~~ scans a data stream for the incoming print job to determine the job description
3 attributes of the incoming print job.

1 42. (canceled)

1 43. (currently amended) The print system of claim 42 31, wherein a PDF file
2 comprises a MUST SPOOL job description attribute.

1 44. (original) The print system of claim 43 wherein the multiplexer processor
2 component spools the PDF file to allow the PDF file to be converted to PostScript before
3 printing.

1 45. (currently amended) The print system of claim 42 31, wherein an IPDS file
2 comprises a MUST PRINT job description attribute.

1 46. (currently amended) An article of manufacture comprising a program storage
2 medium readable by a computer, the medium tangibly embodying one or more programs of
3 instructions executable by the computer to perform a method for processing incoming print
4 jobs, the method comprising:
5 determining job description attributes of an incoming print job;
6 determining when attributes of a print channel associated with the incoming print job
7 comprise MUST PRINT, MUST SPOOL or MAY SPOOL; and
8 processing the incoming print job based upon ~~the attributes of the print channel and~~
9 the job description attributes of the incoming print job and whether the print channel
10 attributes are determined to be MUST PRINT, MUST SPOOL or MAY SPOOL.

1 47. (original) The article of manufacture of claim 46 wherein the processing
2 further comprises:
3 determining whether the job description attributes and the print channel attributes
4 dictate an output path;
5 analyzing a state for a dictated output path when the job description attributes and the
6 print channel attributes dictate an output path; and
7 routing the incoming print job to the dictated path when the state of the dictated path
8 is free.

1 48. (original) The article of manufacture of claim 47 further comprising signaling
2 a stop flow command to halt the incoming print job when the state of the dictated path is
3 busy.

1 49. (original) The article of manufacture of claim 47 further comprising:
2 evaluating a setting for a user output selection when the job description attributes and
3 the print channel attributes do not dictate an output path; and
4 processing the incoming print job based upon the setting for the user output selection.

1 50. (original) The article of manufacture of claim 49 further comprising:
2 printing the incoming print job when the incoming print job is not required to be
3 spooled because of the job description attributes or the print channel attributes and the setting
4 of the user output selection is PRINT ALL;
5 spooling the incoming print job when the incoming print job is not required to be
6 printed because of the job description attributes or the print channel attributes and the setting
7 of the user output selection is SPOOL ALL;
8 printing the incoming print job when the printer is available, the incoming print job is
9 not required to be printed because of the job description attributes or the print channel
10 attributes and the setting of the user output selection is SPOOL WHEN BUSY; and
11 spooling the incoming print job when the printer is busy, the incoming print job is not
12 required to be printed because of the job description attributes or the print channel attributes
13 and the setting of the user output selection is SPOOL WHEN BUSY.